What I claim is:

1. A artificial muscle actuator comprising:

a) one or more thin film layers folded or rolled into the shape of a cylinder forming a center part of said cylinder and an outer part of said cylinder, said film layer having a top surface and a bottom surface, said top surface and said bottom surface each coated with an electrical conducting layer, said conducting layer of said top surface connected by a first electrode on said top surface positioned at said center part and said bottom surface connected by a second electrode on said bottom surface positioned at said outer part; said first and second electrodes being connected to a direct current power source, said power supply capable of generating a electrical potential of a positive electrical charge to the first electrode and a negative electrical charge to the second electrode of at least about 10,000 volts; said film layers comprising a crystal gel made from one or more copolymers characterized by sufficient crystallinity as to exhibit a melting endotherm of at least about 25°C as determined by DSC curve, and said crystal gel being characterized by sufficient crystallinity as to exhibit a melting endotherm of at least about 10°C as determined by DSC curve, said crystal gel having rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom; and said crystal gel having sufficient crystallinity so as to exhibit greater strain under elongation than amorphous gels of SEPS and SEBS.

2. A artificial muscle actuator comprising:

a) one or more thin film layers folded or rolled into the shape of a cylinder forming a center part of said cylinder and an outer part of said cylinder, said film layer having a top surface and a bottom surface, said top surface and said bottom surface each coated with an electrical conducting layer, said conducting layer of said top surface connected by a first electrode on said top surface positioned at said center part and said bottom surface connected by a second electrode on said bottom surface positioned at said outer part; said first and second electrodes being connected to a direct current power source, said power supply capable of generating a electrical potential of a positive electrical charge to the first electrode and a negative electrical charge to the second electrode of at least about 10,000 volts; said film layers comprising a crystal gel made from one or more copolymers characterized by sufficient crystallinity as to exhibit a melting endotherm of at least about 25°C as determined by DSC curve, and said crystal gel being characterized by sufficient crystallinity as to exhibit a melting endotherm of about 25oC, 21oC, 22oC, 23oC, 24oC, 25oC, 26oC, 27oC, 28oC, 29oC, 30oC, 31oC, 32oC, 33oC, 34oC, 35oC, 36oC, 37oC, 38oC, 39oC, 40oC, 41oC, 42oC, 43oC, 44oC, 45oC, 46oC, 47oC, 48oC, 49oC, 50oC, 51oC, 52oC, 53oC, 54oC, 55oC, 56oC, 57oC, 58oC, 59oC, 60oC or higher as determined by differential scanning calorimeter (DSC) curve, said crystal gel having rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom; and said crystal gel having sufficient crystallinity so as to exhibit greater strain under elongation than amorphous gels of SEPS and SEBS.

3. A artificial muscle actuator comprising:

a) one or more thin film layers folded or rolled into the shape of a cylinder forming a center part of said cylinder and an outer part of said cylinder, said film layer having a top surface and a bottom surface, said top surface and said bottom surface each coated with an electrical conducting layer, (E), said conducting layer of said top surface connected by a first electrode on said top surface positioned at said center part and said bottom surface connected by a second electrode on said bottom surface positioned at said outer part; said first and second electrodes being connected to a direct current power source, said power supply capable of generating a electrical potential of a positive electrical charge, to the first electrode and a negative electrical charge, to the second electrode of at least about 10,000 volts; said film layers comprising a composite of one or more crystal gel, G, film layers and one or more electrode, E, coating layers, said composite selected from EGE, EGEGE, EGEGEGE, EGEGEGEGE, and EGEGEGEGEGE; said crystal gel made from one or more copolymers characterized by sufficient crystallinity as to exhibit a melting endotherm of at least about 25°C as determined by DSC curve, and said crystal gel being characterized by sufficient crystallinity as to exhibit a melting endotherm of at least about 10°C as determined by DSC curve, said crystal gel having rigidities of from less than about 2 gram Bloom to about 1,800 gram Bloom; and said crystal gel having sufficient crystallinity so as to exhibit greater strain under elongation than amorphous gels of SEPS and SEBS.

09/517230

ADDED PAGES FOR APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR US APPLICATIONS CLAIMED

09/412,886, filed 10/5/99; 09/285809, filed 4/1/9909/274498, filed March 23, 1999; 08/130,545, filed August 8, 1998; 08/984,459, filed 12/3/97; 08/909,487, filed 7/12/97; 08/863,794, filed 5/27/97; PCT/US97/17534, filed 30 September 1997; U.S. Serial No: 08/719,817 filed September 30, 1996, U.S. Serial No: 08/665,343 filed June 17, 1996 which is a Continuation-in-part of U.S. Serial No: 612,586 filed March 8, 1996; PCT/US94/04278 filed 4/19/94 (published 5/26/95 No. WO95/13851); PCT/US94/07314 filed 6/27/94 (published 1/4/96 No. WO 96/00118); 288,690 filed 8/11/94; 581,188 filed 12/29/95; 581,191 filed 12/29/95; 581,125 filed 12/29/95 now U.S. Patent No. 5,962,527. In turn U.S. Serial Nos. 581,188; 581,191; and 581,125 (now US Patent 5,962,572) are continuation-in-parts of the following applications: Serial Nos.: 288,690, filed August 11, 1994, PCT/US94/07314 filed June 27, 1994 (CIP of PCT/US 94/04278, filed 19 April 1994).